

Rail-Highway Crossing Safety Projects

Rail-Highway crossing safety projects are primarily funded using Federal Highway Administration (FHWA) Surface Transportation Program (STP) Safety funds. These funds are about one-half of the ten percent of STP funds that must be set aside for constructing safety project under Title 23 United States Code (U.S.C.) Section 130. The rail-highway crossing safety projects program is administered/coordinated by the Multimodal Operations Division of the Missouri Department of Transportation (MoDOT).

State Grade Crossing Safety Fund

The Missouri legislature created a State Grade Crossing Safety Account supported by a tax on motor vehicle licensing. This fund, created to upgrade the safety of existing rail-highway crossings is used to provide the 20 percent matching funds for the program. The total amount contributed yearly by this state fund is approximately \$1.0 million. It is administered by the Missouri Department of Economic Development's Motor Carrier and Railroad Safety Division (DED/MCRS).

Rail-Highway Crossing Safety Program

Overall Purpose – The overall purpose of this program is to improve safety at rail-highway grade crossing to both railroads and highway users. Under this program, projects to improve crossing safety generally are funded at 80 percent federal and 20 percent state of the total cost. Project improvements typically done are to install railroad crossing signal devices, circuitry, and surfaces depending on the diagnostic review recommendations. Projects can also provide improvements on adjacent highway approaches to yield better sight distance toward crossings or to install barricades for closures.

Diagnostic Reviews and Procedures – A Joint Diagnostic Team performs yearly reviews on eligible rail-highway crossings. The diagnostic team consists of one MoDOT representative, a member of the DED/MCRS, one or more railroad representatives, and one or more members of a local public works agency, county and/or city. This team evaluates the railroad crossing to determine the best solution to improve safety. Statewide priorities are developed for projects using these funds utilizing a measure called an “Exposure Index” (EI) which involves a number of factors, including the volume of vehicles, the volume of trains, vehicle speed, train speed, and sight distance. A brief explanation of how the Exposure Index is computed is given at the end of this section.

Program General Schedule – A general schedule for programming, development and implementation of rail-highway improvement projects is as follows. This schedule usually involves four phases over a three-year period.

***Rail-Highway Crossing Safety Projects
General Schedule By Phase***

I. Programming (*About seven months duration*)

1. The Missouri Department of Economic Development, Division of Motor Carrier and Railroad Safety (DED/MCRS) and the Missouri Department of Transportation (MoDOT) set criteria and develop a preliminary priority list by March 1.
2. Diagnostic field reviews are to be completed by June 1.
3. MoDOT and DED/MCRS develop project list by June 15.
4. MoDOT submits urban project list of crossing improvements to the Metropolitan Planning Organizations.
5. Rural project list is submitted to the MoDOT Office of Transportation Program Management for listing on the State Transportation Improvement Program (STIP).
6. MoDOT obligates federal funds with the Federal Highway Administration (FHWA) when funds are available (usually October 1).

II. Preliminary Engineering and Agreement Processing (*About seven month duration*)

1. MoDOT sends an agreement for installation of warning devices to the railroad with a copy of the diagnostic review form, and MoDOT authorizes the railroad to perform engineering (15 days after obligation).
2. Railroad returns the agreement with the plan and cost estimate. Copies are sent to DED/MCRS with the plan and cost estimate (120 calendar days from preliminary engineering date).

3. MoDOT and DED/MCRS review the plan and cost estimate.
4. MoDOT sends the agreement to the local agency (if crossing is on a state route, skip to Step 6).
5. The local agency executes the agreement and returns to MoDOT (30 days).
6. MoDOT executes the agreement and distributes fully executed agreements.
7. DED/MCRS staff files an application with DED/MCRS Administrative Law Judge (ALJ) (15 days).
8. All parties respond to the application and waive oral hearing if project is acceptable.
9. DED/MCRS ALJ issues an order to install the devices (30 days)

III. Construction and Inspection *(About 12 months duration)*

1. MoDOT authorizes the railroad to order material and to proceed with construction (5 days).
2. Railroad notifies MoDOT district area engineer five days prior to beginning field work.
3. Railroad installs warning devices. MoDOT inspects work during installation.
4. DED/MCRS performs final inspections within 90 days after project completion.

IV. Billing *(About 10 months duration)*

1. Railroad transmits bill to MoDOT and DED/MCRS within 8 months after project completion.
2. DED/MCRS audits and issues payment from the State Grade Crossing Safety Account (60 days).
3. MoDOT issues payment within 60 days after receiving bill and audits at a later date.

V. Summary: Total Project Duration

Average typical project total elapsed time from Programming through Billing final payment is three years.

General Project Funding Policy and Priority – Usually projects are funded with 80 percent federal and 20 percent state funds.

Rail-Highway Crossing Safety Projects General Funding Policy And Priority For Improvements

1. Passive To Active Warning Devices (*Exposure Index (EI) ≥ 1000*)

80% Federal Highway Administration (FHWA) Surface Transportation Program (STP) Safety Funds

20% Missouri Department of Economic Development, Division of Motor Carrier and Railroad Safety (DED/MCRS) Grade Crossing Safety Account (GCSA)

2. Upgrades Due To Closures

FUNDING TO BE NEGOTIATED

- If none of the remaining crossings meets the funding criteria then a maximum of 50% to be funded with state and federal funds.

3. Device Upgrades (*EI > 5000*) And 5 Years Old

FUNDING TO BE NEGOTIATED

4. Passive Corridor Improvements

80% Material FHWA STP Funds

20% Material GCSA Funds

5. Upgrades Due To High Accident Studies

(Study performed on crossings with 3 accidents in 5 years)

FUNDING TO BE NEGOTIATED

6. Circuitry Upgrades ($EI > 5000$) And 10 Years Old
FUNDING TO BE NEGOTIATED

7. Signal Enhancement Program
FUNDING TO BE NEGOTIATED

8. Surface Improvements
FUNDING TO BE NEGOTIATED

Note: Policy and Priority Items Last Revised January 6, 2000

Rail-Highway Crossing Improvement Project Lists

The following four lists contain the rail-highway crossing improvement projects selected for funding under this program for both the present year and previous years. The rail-highway crossing locations are sorted by the MoDOT Districts. The lists also provide an indication of project status. What each list represents is defined as follows.

List 1 – Projects with executed agreements and an order for the improvements has been issued. The order gives the railroad companies one year for the installation to be completed.

List 2 – Projects funded in the Fiscal Year 2000 STIP, or a previous year, but the final design is not complete. These projects will be ordered within the next year.

List 3 – Projects still in the Preliminary Design Phase.

List 4 – Additional projects to be funded in Fiscal Year 2001.

Estimated federal funding for Fiscal Year 2001 and 2002 is tentatively set at \$3,980,000 each.

Railroad Company Glossary

BNSF – The Burlington Northern and Santa Fe Railway Company

GWWR – Gateway Western Railway Company (*Part of Kansas City Southern Railway Company*)

KCS – Kansas City Southern Railway Company

NS – Norfolk Southern Railway Company

UP – Union Pacific Railroad Company (*Includes Missouri Pacific and Southern Pacific*)

Improvement Type Definitions

Circuitry Upgrade (C.U.) – Upgrade existing circuitry to redundant constant warning time circuitry.

Close – Install barricades and necessary work to close/remove existing crossing.

Device Upgrade (D.U.) – Upgrade existing circuitry to redundant constant warning time circuitry and add gates at the crossing.

Grade Separation – Construct a grade separation structure to eliminate conflicts at crossings;

New Surface – Install new rubberized or concrete surface at crossings to reduce roughness.

Passive to Active (P to A) – Install active warning devices which includes flashing light signals and gates with redundant constant warning time circuitry at crossings which currently have only passive warning devices (*i.e. crossbucks*).

Exposure Index Computation Procedure

The **Exposure Index (EI)** is a two-part equation. The first is a relationship of train-vehicular characteristics called a “Traffic Index Factor”. The second is a relationship of “Required-to-Actual” highway approach sight distances called a “Sight Distance Factor”.

Traffic Index Factor

The **Traffic Index (TI)** is the major component of this Exposure Index. It is determined as follows:

$$TI = (T) (Ts) (V) (Vs) (10^{-4})$$

Where:

- T = number of daily train movements
- Ts = maximum allowable train speed
- V = average daily traffic count
- Vs = normal vehicular operating speed *

Sight Distance Factor

The **Required Sight Distances (RSD)** used are found in Table 20 “*Required Design Sight Distances---*” as extracted from the Highway Research Board *Report 50*.

To calculate the **Sight Distance Obstructions (SDO)**, ** subtract the **Actual Sight Distance** from the **Required Sight Distance**. **Percent of Obstruction (P)** is determined by dividing the **Sight Distance Obstruction** by the **Required Sight Distance**.

$$PO = SDO / RSD$$

The **Percent of Obstruction (P)** is multiplied by the **Traffic Index Factor (TI)** to obtain the **Sight Distance Factor**.

$$PO (TI)$$

Exposure Index

Exposure Index (EI) is computed by totaling the **Traffic Index Factor (TI)** and the **Sight Distance Factor**.

$$EI = TI + PO (TI)$$

* *Not to exceed posted maximum allowable speed.*

** *An obstruction is included in the Sight Distance Obstruction only if it occurs within the area of the Required Sight Distance.*

LIST 1: CROSSINGS IN THE CONSTRUCTION PHASE

Implementation Ordered

DISTRICT 1 (NONE)

DISTRICT 2:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|----------|------|-----------|---------|----------------|-------------|-----------|
| Macon | BNSF | 005 094V | LaPlata | CR 515/Iceberg | P to A | \$100,000 |
| Randolph | NS | 480 734Y | Moberly | Ault St. | P to A | \$100,000 |

DISTRICT 3:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------|------|-----------|------------|-----------------|-------------|-----------|
| Knox | BNSF | 005 063W | Baring | County Rd. 112 | P to A | \$100,000 |
| Lincoln | BNSF | 072 869E | Winfield | Route N | D.U. | \$100,000 |
| Marion | NS | 480 629X | Rensselaer | County Rd. 431 | P to A | \$100,000 |
| Pike | BNSF | 078 439P | Louisiana | S. Carolina St. | P to A | \$100,000 |
| Pike | BNSF | 078 440J | Louisiana | Georgia St. | D.U. | \$100,000 |

DISTRICT 4: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------|-----|-----------|--------------|----------------------|-------------|-----------|
| Jackson | GWR | 293 584D | Blue Springs | 10 th St. | C.U. | \$100,000 |
| Jackson | GWR | 293 585K | Blue Springs | Main St. | D.U. | \$100,000 |
| Jackson | GWR | 293 587Y | Blue Springs | Woods Chapel Rd. | D.U. | \$100,000 |
| Jackson | UP | 422 984E | Kansas City | Holmes Rd. | C.U. | \$100,000 |

DISTRICT 5 (NONE)

LIST 1: CROSSINGS IN THE CONSTRUCTION PHASE (Cont.) **Implementation Ordered**

DISTRICT 6: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|----------------|-----------|------------------|-------------|-------------------|--------------------|-----------------|
| Franklin | BNSF | 664 343R | Pacific | Jefferson St. | P to A | \$130,000 |
| Jefferson | UP | 446 451M | Desoto | Knorpp Rd. | P to A | \$100,000 |
| Jefferson | BNSF | 663 848U | Arnold | Arnold-Tenbrook | D.U. | \$100,000 |
| St. Charles | BNSF | 068 792M | Seeburger | Blasé Station Rd. | C.U. | \$100,000 |
| St. Charles | NS | 483 539J | Foristell | Seeger Ln. | P to A | \$125,000 |
| St. Louis City | UP | 424 882T | St. Louis | Germania St. | D.U. | \$100,000 |

DISTRICT 7:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Barton | BNSF | 669 998U | Lamar | Gulf St. | D.U. | \$100,000 |
| Jasper | KCS | 330 028B | Waco | Kafir Rd. | P to A | \$100,000 |
| Jasper | KCS | 330 029H | Waco | N. Roney St. | Close | \$ 50,000 |
| Jasper | KCS | 330 039N | Joplin | Elk Rd. | D.U. | \$100,000 |

DISTRICT 8: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Greene | BNSF | 664 099W | Springfield | Packer Rd. | D.U. | \$100,000 |
| Greene | BNSF | 664 100N | Springfield | Packer Rd. | D.U. | \$100,000 |
| Greene | BNSF | 664 103J | Springfield | Pythian St. | D.U. | \$100,000 |
| Greene | BNSF | 664 105X | Springfield | Catalpa | D.U. | \$100,000 |
| Greene | BNSF | 673 252J | Strafford | Farm Rd. 249 | P to A | \$100,000 |
| Greene | BNSF | 673 275R | Republic | Farm Rd. 170 | P to A | \$100,000 |
| Greene | BNSF | 673 283H | Republic | Farm Rd. 194 | P to A | \$100,000 |
| Webster | BNSF | 667 628M | Fordland | County Rd. 449 | P to A | \$100,000 |

LIST 1: CROSSINGS IN THE CONSTRUCTION PHASE (Cont.)
Implementation Ordered

DISTRICT 9:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|-----------------|--------------------|-----------------|
| Howell | BNSF | 667 842S | Pomona | County Rd. 1540 | P to A | \$100,000 |

DISTRICT 10:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Dunklin | UP | 787 950U | Malden | Broadwater St. | C.U. | \$100,000 |
| Pemiscot | BNSF | 665 541P | Hayti | Cleveland St. | P to A | \$100,000 |
| Perry | BNSF | 663 936E | McBride | Main | P to A | \$100,000 |

LIST 2: CROSSINGS IN THE DESIGN PHASE

Anticipated Implementation in FY 2002

DISTRICT 1 (NONE)

DISTRICT 2 (NONE)

DISTRICT 3:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|------------|----|-----------|-----------------|-----------------|---------------------|-----------|
| Montgomery | NS | 483 597E | Montgomery City | Mitchell Rd. | Close – build rdwy. | \$100,000 |
| Montgomery | NS | 483 598L | Montgomery City | Walker St. | D.U. – impr. Rdwy. | \$200,000 |
| Montgomery | NS | 483 599T | Montgomery City | Spinsby St. | C.U. | \$100,000 |
| Montgomery | NS | 483 602Y | Montgomery City | Third St. | Close | \$0 |
| Montgomery | NS | 483 603F | Montgomery City | Seventh St. | D.U. | \$100,000 |
| Montgomery | NS | 483 604M | Montgomery City | Route B | D.U. | \$100,000 |
| Montgomery | NS | 916 969U | Montgomery City | Niedergerke Dr. | P to A | \$100,000 |

DISTRICT 4: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|--------|------|-----------|---------------|-----------------------|-------------|-----------|
| Cass | UP | 441 983Y | Pleasant Hill | 175 th St. | P to A | \$100,000 |
| Clay | UP | 605 516T | Moseby | MO Route 92 | D.U. | \$130,000 |
| Platte | BNSF | 095 197R | Armour | Stanton Rd. | P to A | \$130,000 |
| Ray | BNSF | 005 352X | Camden | Missouri St. | D.U. | \$100,000 |
| Ray | BNSF | 005 359V | Orrick | Sibley Rd. | P to A | \$100,000 |
| Ray | NS | 483 848W | Camden | Missouri St. | P to A | \$100,000 |

LIST 2: CROSSINGS IN THE DESIGN PHASE (Cont.)
Anticipated Implementation in FY 2002

DISTRICT 5

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Pettis | UP | 442 094Y | Dresden | Buckley Rd. | P to A | \$130,000 |
| Pettis | UP | 442 096M | Dresden | Hitaffer Rd. | Close | \$0 |
| Pettis | UP | 442 148C | Sedalia | Sellers | Close | \$0 |
| Pettis | UP | 442 149J | Sedalia | Rissler Rd. | Rdwy. Impr. | \$ 60,000 |
| Pettis | UP | 442 152S | Smithton | Lamms Ln. | P to A | \$130,000 |
| Pettis | UP | 442 153Y | Smithton | Pony Path Rd. | Close | \$0 |
| Pettis | UP | 442 156U | Smithton | Selkin Rd. | Close | \$0 |

DISTRICT 6: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|----------------|-----------|------------------|-------------|------------------------------|--------------------|-----------------|
| St. Louis City | MRS | 854 663R | St. Louis | 9 th N. of Dorcas | C.U. | \$100,000 |
| St. Louis City | MRS | 854 664X | St. Louis | Dorcas Busch Pl. | C.U. | \$100,000 |
| St. Louis City | MRS | 854 665E | St. Louis | Dorcas @ Broadway | C.U. | \$115,000 |

DISTRICT 7:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|-----------------|--------------------|-----------------|
| Lawrence | BNSF | 668 319D | Pierce City | County Rd. 1050 | P to A | \$100,000 |

DISTRICT 8 (NONE)

LIST 2: CROSSINGS IN THE DESIGN PHASE (Cont.)

Anticipated Implementation in FY 2002

DISTRICT 9:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|---------------|-----------------|---------------------|-----------------|
| Howell | BNSF | 667 847B | Pomona | County Rd. 5120 | P to A | \$130,000 |
| Washington | UP | 446 429A | Mineral Point | Rainbow Springs | Close – build rdwy. | \$100,000 |

DISTRICT 10:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|--------------|----------------|--------------------|-----------------|
| Butler | UP | 446 260C | Poplar Bluff | B St. | SEP | \$250,000 |
| Butler | UP | 446 262R | Poplar Bluff | C. St. | Close | \$ 15,000 |
| Dunklin | UP | 787 951B | Malden | Francis St. | C.U. | \$100,000 |
| New Madrid | BNSF | 665 588K | Lilbourn | Route D | D.U. | \$130,000 |
| New Madrid | BNSF | 665 589S | Lilbourn | Lewis St. | P to A | \$130,000 |
| New Madrid | BNSF | 665 590L | Lilbourn | Dawson St. | Close | \$130,000 |
| New Madrid | BNSF | 665 591T | Lilbourn | Phillips Ave. | P to A | \$100,000 |
| New Madrid | BNSF | 665 592A | Lilbourn | Route U | D.U. | \$130,000 |
| Scott | BNSF | 665 643H | Oran | Rt. W/Radcliff | D.U. | \$100,000 |
| Scott | BNSF | 663 655C | Chaffee | Gray St. | P to A | \$130,000 |
| Scott | BNSF | 663 965P | Chaffee | County Rd. 220 | P to A | \$130,000 |

LIST 3: CROSSINGS IN THE PRELIMINARY DESIGN PHASE **Anticipated Implementation in FY 2003**

DISTRICT 1 (NONE)

DISTRICT 2:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|------------------|--------------------|-----------------|
| Randolph | NS | 480 731D | Moberly | Gratz- Brown St. | P to A | \$100,000 |
| Randolph | NS | 483 678E | Clark | Route P/Main St. | D.U. | \$130,000 |
| Randolph | NS | 483 687D | Moberly | Prison Rd. | D.U. | \$130,000 |
| Randolph | NS | 483 689S | Moberly | Urbandale Rd. | C.U. | \$130,000 |
| Randolph | NS | 483 691T | Moberly | E. McKinsey St. | C.U. | \$130,000 |
| Randolph | NS | 483 694N | Moberly | W. Carpenter St. | D.U. | \$130,000 |
| Randolph | NS | 483 695V | Moberly | Wightman | D.U. | \$130,0 |

DISTRICT 3:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Audrain | GWWR | 293 344W | Mexico | Morris St. | D.U. | \$130,000 |
| Audrain | NS | 483 626M | Benton City | County Rd. 725 | P to A | \$130,000 |
| Audrain | NS | 483 627U | Benton City | County Rd. 724 | Close | \$0 |
| Audrain | NS | 483 630C | Benton City | Route A | D.U. | \$130,000 |
| Audrain | NS | 483 643D | Mexico | Morris St. | D.U. | \$130,000 |
| Audrain | NS | 483 645S | Mexico | County Rd. 929 | P to A | \$130,000 |
| Audrain | NS | 483 646Y | Mexico | County Rd. 935 | P to A | \$130,000 |
| Audrain | NS | 483 648M | Thompson | Main St. | D.U. | \$130,000 |
| Audrain | NS | 483 649U | Thompson | County Rd. 951 | P to A | \$130,000 |
| Audrain | NS | 483 650N | Thompson | County Rd. 957 | P to A | \$130,000 |
| Audrain | NS | 483 652C | Thompson | County Rd. 963 | P to A | \$130,000 |

LIST 3: CROSSINGS IN THE PRELIMINARY DESIGN PHASE (Cont.) **Anticipated Implementation in FY 2003**

DISTRICT 3 (Cont.):

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Audrain | NS | 483 654R | Thompson | County Rd. 973 | P to A | \$130,000 |
| Audrain | NS | 483 657L | Centralia | County Rd. 989 | P to A | \$130,000 |
| Marion | BNSF | 063 537L | Hannibal | Route JJ | D.U. | \$130,000 |

DISTRICT 4: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|--------------|-------------------|--------------------|-----------------|
| Jackson | UP | 411 877J | Kansas City | Gennesse St. | D.U. | \$130,000 |
| Jackson | UP | 441 942U | Independence | South Ave. | C.U. | \$100,000 |
| Jackson | BNSF | 663 541H | Kansas City | Gennesse St. | D.U. | \$130,000 |
| Johnson | UP | 442 068J | Montserrat | County Rd. 801 | P to A | \$100,000 |
| Johnson | UP | 442 085A | Knob Noster | Route FF | C.U. | \$130,000 |
| Lafayette | GWWR | 293 554L | Odessa | MO Rt. 131/Second | D.U. – rdwy. Impr. | \$200,000 |
| Ray | BNSF | 005 345M | Henrietta | County Rd. 319 | P to A | \$130,000 |
| Ray | IMRL | 375 486R | Lawson | Garner St. | P to A | \$100,000 |

DISTRICT 5 (NONE)

DISTRICT 6: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|-----------------|--------------------|-----------------|
| Franklin | BNSF | 664 376D | St. Clair | W. Gravois Ave. | P to A | \$100,000 |

LIST 3: CROSSINGS IN THE PRELIMINARY DESIGN PHASE (Cont.) **Anticipated Implementation in FY 2003**

DISTRICT 7:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|---------------------|---------------------|-----------------|
| Barry | BNSF | 668 316H | Monett | Eisenhower St. | SEP | \$200,000 |
| Barry | BNSF | 673 367D | Monett | Central Ave. | Close | \$0 |
| Bates | MNA | 442 049H | Adrian | 1 st St. | P to A | \$130,000 |
| Lawrence | BNSF | 673 309H | Aurora | County Rd. 1210 | P to A | \$130,000 |
| Newton | BNSF | 668 369G | Neosho | Washington St. | Close – build rdwy. | \$100,000 |
| Newton | BNSF | 668 370B | Neosho | Baxter St. | D.U. | \$100,000 |

DISTRICT 8: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|-----------------|--------------------|-----------------|
| Greene | BNSF | 664 262R | Springfield | U.S. 60/U.S. 65 | D.U. | \$100,000 |
| Webster | BNSF | 667 650A | Diggins | Route NN | D.U. | \$130,000 |
| Webster | BNSF | 667 653V | Diggins | Short Rd. | P to A | \$130,000 |

DISTRICT 9:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|------------------|--------------------|-----------------|
| Texas | BNSF | 667 722B | Cabool | CR 5930/Cannaday | Close | \$0 |
| Texas | BNSF | 667 726D | Cabool | Cedar St. | Close | \$0 |
| Texas | BNSF | 667 862D | Cabool | Walnut St. | Close-build rdwy. | \$200,000 |
| Texas | BNSF | 667 864S | Cabool | Airport Rd. | Close | \$0 |

LIST 3: CROSSINGS IN THE PRELIMINARY DESIGN PHASE (Cont.)
Anticipated Implementation in FY 2003

DISTRICT 10:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|---------------|----------------|--------------------|-----------------|
| St. Francois | UP | 446 412W | Iron Mountain | Bellview St. | P to A | \$130,000 |
| Scott | BNSF | 665 642B | Oran | Greer St. | P to A | \$100,000 |
| Stoddard | UP | 446 328N | Dexter | Route ZZ | D.U. | \$130,000 |

LIST 4: ADDITIONAL PROJECTS TO BE FUNDED IN FISCAL YEAR 2001 **Anticipated Implementation in FY 2004**

DISTRICT 1:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|-----------------------|--------------------|-----------------|
| Caldwell | KCS | 329 818K | Belton | 183 rd St. | P to A | \$130,000 |

DISTRICT 2:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------------|--------------------|-----------------|
| Carroll | BNSF | 005 302U | Carrollton | County Rd. 708 | P to A | \$130,000 |
| Carroll | BNSF | 005 311T | Carrollton | County Rd. 636 | P to A | \$130,000 |
| Chariton | NS | 483 753N | Keytesville | County Rd. 425 | P to A | \$130,000 |
| Howard | GWR | 293 420M | Glasgow | 15 th St. | Close | \$0 |
| Howard | GWR | 293 421U | Glasgow | 8 th St. | Close | \$0 |
| Howard | GWR | ? | Glasgow | ? | P to A-Build rdwy. | \$200,000 |
| Randolph | GWR | 293 362F | Clark | Route P/Main | P to A | \$130,000 |

DISTRICT 3:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Audrain | GWR | 293 346K | Mexico | County Rd. 929 | P to A | \$130,000 |
| Audrain | GWR | 293 347S | Thompson | County Rd. 935 | P to A | \$130,000 |
| Audrain | GWR | 293 349F | Thompson | Main St. | D.U. | \$130,000 |
| Audrain | GWR | 293 350A | Thompson | County Rd. 951 | P to A | \$130,000 |
| Audrain | GWR | 293 351G | Thompson | County Rd. 957 | P to A | \$130,000 |
| Audrain | GWR | 293 353V | Thompson | County Rd. 963 | P to A | \$130,000 |
| Audrain | GWR | 293 355J | Thompson | County Rd. 973 | P to A | \$130,000 |
| Audrain | GWR | 293 358E | Centralia | County Rd. 989 | P to A | \$130,000 |
| Clark | BNSF | 005 014A | Medill | Santa Fe St. | P to A | \$130,000 |

LIST 4: ADDITIONAL PROJECTS TO BE FUNDED IN FISCAL YEAR 2001 (Cont.)

Anticipated Implementation in FY 2004

DISTRICT 3 (Cont.):

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Marion | BNSF | 063 528M | Hannibal | County Rd. 253 | P to A | \$130,000 |
| Marion | NS | 480 616W | Hannibal | Lindell Ave. | Close-Build rdwy. | \$ 85,000 |

DISTRICT 4: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|-----------------------|--------------------|-----------------|
| Clay | IMRL | 375 445L | Lawson | 174 th St. | P to A | \$130,000 |
| Jackson | KCS | 329 705E | Kansas City | Front St. | P to A | \$130,000 |
| Jackson | KCS | 329 709G | Kansas City | Front St. | P to A | \$130,000 |
| Jackson | BNSF | 663 537T | Kansas City | Mulberry St. | P to A | \$130,000 |
| Jackson | BNSF | 663 538A | Kansas City | Mulberry St. | P to A | \$130,000 |
| Ray | BNSF | 005 347B | Camden | County Rd. 320 | P to A | \$130,000 |

DISTRICT 5:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|----------------|------------------|--------------------|-----------------|
| Cole | UP | 442 661N | Jefferson City | Industrial Dr. | P to A | \$130,000 |
| Pettis | UP | 442 086G | Knob Noster | E. Prairie Grove | P to A | \$130,000 |

DISTRICT 6: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|----------------|-----------|------------------|----------------|-----------------|--------------------|-----------------|
| St. Charles | BNSF | 068 768L | Old Monroe | Dalbow St. | P to A | \$130,000 |
| St. Louis | UP | 425 018L | Webster Groves | Brentwood St. | P to A | \$130,000 |
| St. Louis City | UP | 425 030T | St. Louis | Manchester Ave. | P to A | \$130,000 |

**LIST 4: ADDITIONAL PROJECTS TO BE FUNDED IN FISCAL YEAR 2001
(Cont.)
Anticipated Implementation in FY 2004**

DISTRICT 7:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|----------------------|-----------------|
| Jasper | MNA | 434 857M | Joplin | Murphy Blvd. | P to A | \$130,000 |
| Jasper | BNSF | 669 557A | Joplin | Murphy Blvd. | P to A | \$130,000 |
| McDonald | KCS | 330 186B | Noel | County Rd. | P to A | \$130,000 |
| Newton | KCS | 330 132V | Neosho | N. Lark St. | Close | \$0 |
| Newton | KCS | 330 133C | Neosho | Sorrel St. | Close | \$0 |
| Newton | KCS | 330 134J | Neosho | S. Lark St. | Close | \$0 |
| Newton | KCS | ? | Neosho | Reynolds Rd. ? | P to A – Build Rdwy. | \$200,000 |

DISTRICT 8: (MPO)

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Greene | MNA | 445 056A | Springfield | Scenic Dr. | P to A | \$130,000 |
| Webster | BNSF | 667 628M | Fordland | County Rd. | P to A | \$130,000 |

DISTRICT 9:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|---------------------|--------------------|-----------------|
| Howell | BNSF | 667 844F | Pomona | County Rd. 1820 | P to A | \$130,000 |
| Phelps | BNSF | 664 598M | Rolla | 7 th St. | D.U. | \$130,000 |
| Phelps | BNSF | 664 599U | Rolla | 6 th St. | D.U. | \$130,000 |
| Phelps | BNSF | 664 600L | Rolla | Rolla St. | D.U. | \$130,000 |
| Phelps | BNSF | 664 602A | Rolla | Park St. | Close | \$0 |
| Phelps | BNSF | 664 604N | Rolla | Walker St. | D.U. | \$130,000 |

**LIST 4: ADDITIONAL PROJECTS TO BE FUNDED IN FISCAL YEAR 2001
(Cont.)
Anticipated Implementation in FY 2004**

DISTRICT 10:

| County | RR | Crossings | City | Roadway | Improvement | Estimate |
|---------------|-----------|------------------|-------------|----------------|--------------------|-----------------|
| Stodddard | UP | 789 073S | Bell City | County Rd. 340 | P to A | \$130,000 |
| Stoddard | UP | 789 099U | Dexter | County Rd. 567 | P to A | \$130,000 |
| Stoddard | UP | 789 114U | Dexter | County Rd. 708 | P to A | \$ |